Glossary of Terms

Age and Age Groups: STD and TB surveillance data include all ages. HIV surveillance data include adults and adolescents only (persons aged 13 years and older). STD and TB data are grouped into 5-year age groups, and ten-year age groups are used with HIV surveillance data. In the NCHHSTP AtlasPlus, age groups (rather than single year of age) are used to ensure data security and confidentiality.

AIDS (also known as HIV infection classified as stage 3 (AIDS)): is the most severe phase of HIV infection. People with HIV classified as stage 3 (AIDS) have such badly damaged immune systems that they get an increasing number of severe illnesses, called opportunistic illnesses. Without treatment, people with HIV classified as stage 3 (AIDS) typically survive about 3 years. Common symptoms of stage 3 (AIDS) include chills, fever, sweats, swollen lymph glands, weakness, and weight loss. People are classified as stage 3 (AIDS) when their CD4 cell count drops below 200 cells/mm or if they develop certain opportunistic illnesses. People with HIV classified as stage 3 (AIDS) can have a high viral load and be very infectious (also see: HIV).

Cases refers to the number of new cases of disease in a defined population over a specific time period (also see: rates). For more information, please see the FAQ.

Chlamydia: is a sexually transmitted disease (STD) caused by *Chlamydia trachomatis*. Infections can occur in the genitals, rectum, and throat. It is a very common infection, especially among young women aged 15–24 years. Chlamydia is transmitted by having vaginal, anal, or oral sex with someone who has chlamydia. A pregnant woman with chlamydia can give the infection to her baby during childbirth. Chlamydia is easily cured with antibiotics but if left untreated, it can lead to serious health problems, such as pelvic inflammatory disease. Testing for chlamydia is recommended once a year in all sexually active women aged ≤25 years and in women >25 with risk factors for infection, such as more than sex partner or not using condoms.

Confidence Interval (CI): these represent the range in which the population value is likely to be. They are computed using the estimate of the population value and the associated standard error.

Country of Birth: Non-U.S.–born persons are defined as those born outside the United States, American Samoa, Guam, Midway Island, the Commonwealth of the Northern Mariana Islands, Puerto Rico, the U.S. Virgin Islands, and U.S. minor and outlying Pacific islands.

Denominator data: the population size used to calculate a rate (in a fraction, it's the bottom number). The population denominators used to compute these rates were based on population data from the U.S. Census Bureau. Each rate was calculated by dividing the total number of cases (or deaths or prevalence) for the calendar year by the size of the population for that calendar year and then multi-plying the number by 100,000.

Geography: The NCHHSTP AtlasPlus contains data at the national, state, and county level. The disease selected will determine the geography available (see table). Data at the state or county level, for both

cases and rates, may be suppressed to protect against a situation in which a person could potentially be identified (e.g., a small number of cases).

Hepatitis data are from the 50 states and the District of Columbia. STD data are from the 50 states, the District of Columbia, Puerto Rico, Guam, and the U.S. Virgin Islands. HIV and TB data are from the 50 states, the District of Columbia, American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands.

Measure	United States	American Samoa	Guam	Northern Mariana Islands	Puerto Rico	US Virgin Islands
AIDS diagnoses	√	√	√	√	√	√
AIDS deaths	√	√	√	√	√	√
AIDS prevalence	√	√	√	√	√	√
HIV diagnoses*	√	√	√	√	√	√
HIV deaths	√	√	√	√	√	√
HIV prevalence*	√	√	√	√	√	√
Linkage to HIV care	√*					
Receipt of HIV medical care	√*					
HIV viral suppression	√*					
Diagnosed infection among persons living with HIV infection	√					
Estimated HIV incidence	√*					
Estimated HIV prevalence (diagnosed and undiagnosed	√*					
Chlamydia*	√		√		√	√
Gonorrhea*	√		√		√	√
Primary & Secondary Syphilis*	√		√		√	√
Early Latent Syphilis*	√		√		√	√
Congenital Syphilis*	√		√		√	√
Tuberculosis*	√	√	√	√	√	√
Hepatitis A	√					
Hepatitis B	√					
Hepatitis C	√					
SDOH, Uninsured*	√				√	
SDOH, Vacant Housing*	√				√	
SDOH, Population 25 years and older w/o high school diploma*	√				√	
SDOH, Households living below federal Poverty level*	√				√	
SDOH, Population living in a rural area*	√				√	
Urbanization level	√				√	

SDOH: social determinants of health

Gonorrhea: is a sexually transmitted disease (STD) caused by *Neisseria gonorrhoeae.* Infections can occur in the genitals, rectum, and throat. It is a very common infection, especially among young people ages 15–24 years. Gonorrhea is transmitted by having vaginal, anal, or oral sex with someone who has gonorrhea. A pregnant woman with gonorrhea can give the infection to her baby during childbirth. Gonorrhea can be treated with antibiotics and cured. Untreated gonorrhea can cause serious and permanent health problems in both women and men. In women, untreated gonorrhea can cause pelvic inflammatory disease.

Hepatitis: means inflammation of the liver. Toxins, certain drugs, some diseases, heavy alcohol use, as well as certain bacteria and viruses can cause hepatitis.

Viral Hepatitis A: a contagious liver disease that results from infection with the hepatitis A virus (HAV). It can range in severity from a mild illness lasting a few weeks, to a severe illness lasting several months. Hepatitis A is usually spread when a person ingests fecal matter – even in microscopic amounts – from contact with objects, food, or drinks contaminated by the feces, or stool, of an infected person. There is a vaccine for hepatitis A.

Viral Hepatitis B: a liver infection caused by the hepatitis B virus (HBV). HBV is transmitted when blood, semen, or another body fluid from a person infected with HBV enters the body of someone who is not infected. This can happen through sexual contact; sharing needles, syringes, or other drug-injection equipment; or from mother to baby at birth. For some people, hepatitis B is an acute, or short-term, illness but for others, it can become a long-term, chronic infection. Chronic HBV infection can lead to serious health issues, like cirrhosis or liver cancer. The best way to prevent HBV infection is by getting vaccinated.

Viral Hepatitis C: a liver infection caused by the hepatitis C virus (HCV). HCV is a blood-borne virus. Today, some people become infected with the hepatitis C virus by sharing needles or other equipment to inject drugs. For some people, hepatitis C is a short-term illness but for 70%–85% of people who become infected with HCV, it becomes a long-term, chronic infection. Chronic HCV infection is a serious disease than can result in long-term health problems, even death. There is no vaccine for hepatitis C. The best way to prevent hepatitis C is by avoiding behaviors that can spread the disease, especially injecting drugs.

HIV: a virus (human immunodeficiency virus) that is spread through certain body fluids that attacks the body's immune system, specifically the CD4 cells, often called T cells. These special cells help the immune system fight off infections. Untreated, HIV reduces the number of CD4 cells in the body. This damage to the immune system makes it harder and harder for the body to fight off infections and some other diseases. Certain opportunistic infections or cancers take advantage of a very weak immune system and signal that the person has acquired immunodeficiency syndrome (AIDS) or stage 3 (AIDS). No effective cure exists for HIV. But with proper medical care, HIV can be controlled. Some groups of people in the United States are more likely to get HIV than others because of many factors, including their sex partners, their risk behaviors, and where they live (also see: AIDS).

Incidence: the number of new cases of disease in a defined population over a specific time period; often measured as a rate per 100,000 population.

Natural breaks: data classification method where classes are defined based on gaps in the data distribution (see also: quantiles).

Period Estimate (1- and 5-Year): These estimates are derived from continuously (on a daily basis) assembled data that has been aggregated over a year (1-year) or five years (5-year). As a result, they differ from point-in-time estimates.

Prevalence: the number of diagnosed disease cases in a defined population during a specific time period.

Quantiles: data classification method where data are rank-ordered and then an equal number of observations are placed in each class; thus, each class contains the same number of observations (or geographic units); so with quintiles, 1/5 of the observations will be in each of 5 groups; with quartiles, 1/4 of the observations will be in each of 4 groups. Quartiles and quintiles are useful for showing the top 25% or top 20% of the population (see also: natural breaks).

Race/ethnicity: In 1997, the Office of Management and Budget (OMB) announced the revisions to the classification of federal data on race and ethnicity. The NCHHSTP AtlasPlus uses this new classification standard and the following racial/ethnic categories: American Indian or Alaska Native, Asian, black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, white, and multiple races. In the NCHHSTP AtlasPlus, persons of Hispanic/Latino ethnicity can be of any race.

Despite prevention efforts, some groups of people are affected by HIV, viral hepatitis, STDs, and TB more than other groups of people. Differences may occur by gender, race or ethnicity, education, income, disability, geographic location, county or origin of birth, and sexual orientation among others.

Rates: refer to the number of cases divided by the size of the specified population (also see: cases) in a set time period. For more information, please see the FAQ.

Relative Standard Error (RSE): is the standard error expressed as percentage of the estimate. Lower percentages are considered more reliable for general use.

Sex: for HIV and TB data, sex is based on the person's sex at birth; for STD data, sex is defined as the current sex of patient.

Social Determinants of Health (SDOH): are the circumstances in which people are born, grow up, live, work, and age, as well as the systems put in place to deal with illness. These circumstances are in turn shaped by a wider set of forces: economics, social policies, and politics. These data are included in the NCHHSTP AtlasPlus as they are related to our Center's mission to reduce health inequities among populations most disproportionately affected by HIV, STDs, TB and hepatitis, based on the available surveillance data.

Suppression: In order to protect personal privacy, and to prevent revealing information that might identify specific individuals, small data values are not available in some circumstances. The suppressions rules are:

HIV or stage 3 (AIDS):

If HIV or stage 3 (AIDS) data are queried for <u>National-level</u> data:

- No suppression rules are applied

If HIV or stage 3 (AIDS) data are queried for <u>state-level</u> data:

- If denominator population is less than 100, then data are suppressed
- Two-, three-, or four-way demographic/risk stratifications not displayed for:
  - U.S. dependent areas (except Puerto Rico)
  - New Hampshire
- If rates by race/ethnicity for Puerto Rico are queried, then data are suppressed
- Data are additionally suppressed in accordance with the state-level data suppression requirements approved by each state under the data re-release agreements

If HIV or stage 3 (AIDS) are queried for <u>county-level</u> data:

- If the denominator population is less than 100 or total case count is 1–4, then data are suppressed

- No 4-way demographic/transmission category stratifications are displayed
- No stage 3 (AIDS) data are displayed at the county level
- No death data are displayed at the county level
- Demographic/risk stratifications for transmission category does not include the "Other" category
- No data for U.S. dependent areas (except Puerto Rico)
- No rates by race/ethnicity for Puerto Rico are provided
- Data are additionally suppressed in accordance with the county-level data suppression requirements approved by each state under the data re-release agreements

Syphilis: an STD that progresses through a series of clinical stages and can cause long-term complications if not treated correctly. The clinical stages of syphilitic infection are primary, secondary, latent (often divided into early latent and late latent), and late syphilis with clinical manifestations. You can get syphilis by direct contact with a syphilis sore during vaginal, anal, or oral sex. Sores can be found on the penis, vagina, anus, in the rectum, or on the lips and in the mouth. Possible complications of untreated syphilis include neurosyphilis, ocular syphilis resulting in visual impairment or blindness, and cardiovascular disease.

> **Congenital Syphilis:** is a disease that occurs when a mother with syphilis passes the infection on to her baby during pregnancy. An infected baby may be born without signs or symptoms of <u>congenital</u>

syphilis. However, if not treated immediately, the baby may develop serious problems within a few weeks. Untreated babies can have health problems such as cataracts, deafness, or seizures, and can die (also see: syphilis). CDC recommends that all pregnant women be screened for syphilis with a blood test at the first prenatal visit.

Early Latent Syphilis: Syphilis is a disease that progresses through a series of stages if it is not treated. The latent stage of syphilis describes the stage of disease when there are no symptoms. Within the first year of infection, latent syphilis is called early latent syphilis. After the first year of infection, latent syphilis is called late latent syphilis. If untreated, syphilis can remain in the body for years without any signs or symptoms. However, treatment is still necessary in order to prevent later complications (also see: syphilis).

Primary and Secondary Syphilis: Syphilis is a disease that progresses through a series of stages if it is not treated. Primary syphilis is the first stage of syphilis and is characterized by a sore or sores at the original site of infection. The sore usually lasts 3 to 6 weeks and heals regardless of whether or not treatment is received.

The secondary stage of syphilis usually starts with a rash on one or more areas of the body. The rash can show up when the primary sore is healing or several weeks after the sore has healed. Other symptoms may include fever, swollen lymph glands, sore throat, patchy hair loss, headaches, weight loss, muscle aches, and fatigue. The symptoms of primary and secondary syphilis will go away on their own, but treatment is still necessary in order to prevent the infection from progressing and causing complications (also see: syphilis).

Primary and secondary syphilis data are typically reported together when describing syphilis trends or burden of disease because they represent the symptomatic and earliest stages of infection.

Surveillance data: Public health surveillance is the ongoing collection and analysis of health data to improve public health and safety. This NCHHSTP AtlasPlus contains HIV, STD, Hepatitis, and TB surveillance data reported to the CDC. These data come from health departments in all 50 states, the District of Columbia, selected cities, and outlying U.S. territories.

Transmission category: is the term for the classification of cases that summarizes a person's possible HIV risk factor; the summary classification results from selecting, from the presumed hierarchical order of probability, the 1 (single) risk factor most likely to have been responsible for transmission. For surveillance purposes, a diagnosis of HIV infection is counted only once in the hierarchy of transmission categories. Persons with more than 1 reported risk factor for HIV infection are classified in the transmission category listed first in the hierarchy. The exception is men who have had sexual contact with other men and injected drugs; this group makes up a separate transmission category. The transmission categories in hierarchical order are:

1) Male-to-male sexual contact (MSM): men who have had sexual contact with men (i.e., homosexual contact) and men who have had sexual contact with both men and women (i.e., bisexual contact)

2) Injection drug use (IDU): injected non-prescription drugs

3) Male-to-male sexual contact and Injection drug use (MSM-IDU): men who have had sexual contact with other men and injected non-prescription drugs

4) Heterosexual contact (HET): persons who have ever had heterosexual contact with a person known to have, or to be at high risk for, HIV infection

5) Other: all other transmission categories (e.g., blood transfusion, hemophilia, perinatal exposure, risk factor not reported or not identified).

Transmission of HIV: HIV can only be spread by certain body fluids—blood, semen (*cum*), pre-seminal fluid (*pre-cum*), rectal fluids, vaginal fluids, and breast milk—from a person who has HIV. These fluids must come in contact with a mucous membrane or damaged tissue or be directly injected into the bloodstream (from a needle or syringe) for transmission to occur. Mucous membranes are found inside the rectum, vagina, penis, and mouth.

Tuberculosis (TB): is caused by a bacterium called *Mycobacterium tuberculosis*. TB bacteria are spread through the air from one person to another. The TB bacteria are put into the air when a person with TB disease of the lungs or throat coughs, speaks, or sings. People nearby may breathe in these bacteria and become infected. The bacteria usually attack the lungs, but TB bacteria can attack any part of the body, such as the kidneys, spine, and brain. Not everyone infected with TB bacteria becomes sick. As a result, two TB-related conditions exist: latent TB infection (LTBI) and TB disease. If not treated properly, TB disease can be fatal.

People with TB disease may spread the bacteria to people with whom they spend many hours. It is very important that people who have TB disease are treated, finish the medicine, and take the drugs exactly as prescribed. If they stop taking the drugs too soon, they can become sick again; if they do not take the drugs correctly, the TB bacteria that are still alive may become resistant to those drugs. TB that is resistant to drugs is harder and more expensive to treat. TB disease can be treated by taking several drugs for 6 to 9 months.

Unadjusted (HIV) data: refers to HIV diagnosis, death, and prevalence data without statistical adjustments for delays in reporting of cases to CDC. CDC periodically assesses the portfolio of the National HIV Surveillance System (NHSS) to determine whether methods and efficiencies in data collection and analysis meet the information needs of the nation. In determining that adjustments for reporting delays were no longer necessary, CDC considered improvements in data quality as a result of the following: availability of additional case information; shorter time for processing duplicates from multiple states; and, a better system for national data processing. CDC will continue to statistically adjust transmission category data by using multiple imputation techniques to account for missing transmission category information in cases reported to CDC. (See the Technical Notes for information on multiple imputation.)

Year: For diagnoses, year refers to the year a person received a diagnosis. For deaths, year refers to the year a person died. For persons living with diagnosed HIV, year refers to the end of the queried

calendar year. For incidence, year refers to the year a person was infected. The range of years available is dependent on the disease queried. In the maps, when 'change over time' is selected, the data classes in the legend remain constant to allow comparison between years.